Claims

1. An electrical machine having at least four exciter poles in the stator (11) and having a commutator rotor (13) which has a number of slots (N) and pole teeth (Z) on its circumference, which number is greater than the number of exciter poles, having a number of commutator laminations (L) which is twice as large as the number of pole teeth, and having at least one pair of stationary carbon brushes (K), which are offset from one another by a pole pitch of the exciter pole and cooperate with the laminations of the commutator for supplying current to coils (S) which are each wound onto one of the pole teeth, and the diametrically opposed laminations are each joined together via contact bridges (K), characterized in that when there is an even number of slots (N), pole teeth (Z) and coils (S), the beginning and end of one coil (S1) of the coils (S1, S2) disposed on adjacent pole teeth (Z1, Z2) is connected directly to the laminations (L1, L12) adjacent to one another, and the beginning and end of the other coil (S2) is connected via one of the contact bridges (K1) to the laminations (L12, L11) adjacent to one another.

2. The electrical machine as recited in claim 1, characterized in that the coils (S1, S2) adjacent to one another in terms of one direction of rotation are laid with their beginnings and ends on the laminations (L1, L12; L12, L11) that are adjacent to one another in the other direction of rotation.

3. The electrical machine as recited in claim 2, characterized in that the beginnings and ends of the adjacent coils (S1, S2) are laid in alternation directly and indirectly, respectively, on adjacent laminations (L1, L12; L12, L11) via a contact bridge (K1).

4. The electrical machine as recited in one of claims 1 through 3, characterized in that the coils (S1, S2) disposed on adjacent pole teeth (Z1, Z2) are each connected directly or indirectly in series with one another via one of the contact bridges (K).

5. The electrical machine as recited in claim 4, characterized in that the adjacent coils (S1, S2) are connected in alternation directly and via the contact bridge (K1), respectively, in series with one another.

6. The electrical machine as recited in claim 5, characterized in that all of the preferably six coils (S) and contact bridges (K) are produced continuously with one winding wire (17).

7. The electrical machine as recited in claim 6, characterized in that the coils (S) and contact bridges (K) are wound continuously in alternation.

8. The electrical machine as recited in one of claims 6 or 7, characterized in that at least one of the contact bridges (K), and preferably all the contact bridges, are shifted from the commutator side of the rotor (13), through its slots (N), to the side of the rotor (15) facing away from the commutator (16).

9. The electrical machine as recited in claim 8, characterized in that the contact bridges (K) shifted to the side of the rotor (13) facing away from the commutator (16) are wrapped around at least one pole tooth (Z) and at most two pole teeth (Z) of the rotor (13).

10. The electrical machine as recited in one of claims 6 through 9, characterized in that the beginning and end of every other coil (S2) are laid from the commutator side through adjacent slots (N) to the side of the rotor facing away from the commutator (16).

11. The electrical machine as recited in one of claims 6 through 10, characterized in that all the coils (S) and contact bridges (K) can be wound continuously by means of automatic winders, in particular by means of so-called flyers or needles.